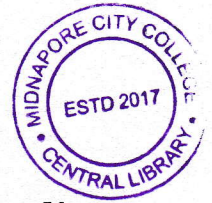


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PG CBCS
M.Sc. Semester-IV Examination, 2022
DEPARTMENT OF ZOOLOGY
 PAPER: ZOO 495B
 (SPL PRACTICAL)



Full Marks: 50

Time: 5 hrs

Write the answer for each unit in separate sheet

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

ZOO 495B: ECOLOGY SPECIAL

1. a. Describe the principle and procedure of estimating the water holding capacity of the soil sample provided. 5

b. In two adjacent forest areas namely Bandhavgarh and Kanha National Park, there are six different species of animals with overlapping habitat range. From the given data calculate the faunal similarity using an appropriate biodiversity index. 5

Area	Sambar Deer	Cheetal	Barking Deer	Tiger	Leopard	Common langur
Bandhavgarh National Park	0	0	10	20	40	30
Kanha National Park	10	20	50	0	30	30

2. The number of individuals of five species of tree populations was studied in ten different areas of forest ecosystem. Calculate from the given data the density, diversity, frequency and abundance of the tree community. 10

Sl. No.	Name of species	Number of individuals sighted in area number									
		A	B	C	D	E	F	G	H	I	J
1	<i>Dalbergia latifolia</i>	1	7	0	5	0	0	2	10	2	0
2	<i>Pterocarpus marsupium</i>	4	1	2	0	0	0	1	5	0	6
3	<i>Tectona grandis</i>	11	5	0	0	2	4	0	2	0	0
4	<i>Terminalia crenulata</i>	0	2	14	0	6	1	3	0	0	8
5	<i>Shorea robusta</i>	0	0	0	9	2	8	0	0	0	3

3. In a forest ecosystem there are 5 species of deer and 6 species of antelopes residing in the same area competing for food. The number of deer and antelopes are 56, 52, 48, 45, 40, and 37, 34, 41, 43, 25, 34 respectively. Calculate the species richness and distribution pattern of the animals using appropriate biodiversity index. 10

4. Discuss the importance of earthworm in vermitechnology. Write the procedure for estimation of tree height. 5+5

5. Laboratory note-book. 5

6. Viva voce. 5
